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ABSTRACT

This publication has been developed for use as an educational aid and practical reference guide to assessing standards information in Canada, where pressure has increased to implement existing standards and to develop new ones, and where increasing competition in international trade has emphasized the need for industries to comply with foreign standards. A logical approach to locating needed documents and information related to standards is provided in the guide, which is divided into seven chapters: (1) the who, what, and how of standards; (2) catalogues, directories, and databases containing information on standards; (3) the formats and classification of standards collections; (4) sources of information on standards; (5) obtaining copies of standards and other documents; (6) information on the Advisory Committee on Standards Information Services and the National Standards Information System of Canada (CANSIS); and (7) a directory of sources of information and documents. Also included are a bibliography containing both references and recommended readings and a list of acronyms used in the guide. (CGD)

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A GUIDE TO ACCESSING STANDARDS INFORMATION IN CANADA

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Authors wishing to submit articles, to be considered for publication in this series, should write:

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Standards Council of Canada
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The Standards Council of Canada (SCC) is a crown corporation created in 1970 by an Act of Parliament. Its object, "to foster and promote voluntary standardization in Canada", is seen as a means of advancing the national economy, benefiting the health, safety and welfare of the public, assisting and protecting consumers, and, not least, "facilitating domestic and international trade, and furthering international cooperation in the field of standards".

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A GUIDE TO ACCESSING STANDARDS INFORMATION IN CANADA

by Norm A. Hagan

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FOREWORD

Recent years have seen an ever increasing need to make standards information more accessible. Pressure to implement existing standards, and to develop new ones, amplifies this need. Whether the pressure comes from the public, industry or government, there is little question that health, welfare, and safety are high profile issues.

Increasing competition in international trade also emphasizes the need for industries to comply with foreign standards — if those industries wish to remain competitive.

These pressures have a pronounced effect on the necessity of finding information related to standards...quickly. Individuals and organizations are showing a greater interest in knowing more about standards, including how and where to obtain them. Standards organizations are responding by providing additional educational and promotional material.

This issue of **SYMPOSIUM** has been developed for use as an educational aid and practical reference guide. It will also serve as a handbook to those persons pursuing careers as **Information Resource Specialists**, as well as others who use standards.

Standards and related information are sometimes difficult to retrieve, particularly for those who are not familiar with the various organizations that make up the world of standards. This guide provides the reader with a logical approach to locating needed documents and information.

The guide does not duplicate the large volume of information already existing elsewhere. Rather, it will provide the reader with information on how to make use of those publications, and who to contact when additional help is required. This guide will aid users in selecting and ordering additional standards and related reference material.

Developed primarily for the Canadian scene, the guide provides an insight into how Canada relates to the international standards community in information exchange. A section on how to gain access to foreign and international standards and standards-related information is also included.

Standards organizations are usually more than willing to provide both general and specific information on standards and standardization. Seminars are offered to groups on request, often at no charge.

Chapter I
STANDARDS

WHAT ARE THEY?

The Standards Council of Canada's *Glossary of Common Administrative Terms Used in Standardization Activities* defines a standard as "a published document which contains requirements, procedures or definitions for a specific activity".

The International Organization for Standardization's Guide 2 *General terms and their definitions concerning standardization and related activities* states that publishing a standard is usually the result of having established provisions for repetitive use, aimed at the resolution of actual or potential problems.

In other words, having identified a recurring or potentially repetitive problem, an agreed upon solution for its resolution is developed and published as a standard.

Published standards are produced by a great number of organizations. Companies, industry associations, government and others develop various standards aimed at meeting their own particular requirements. But there are also a number of Canadian organizations that produce standards intended for the use of anyone and everyone. These standards are known as voluntary consensus standards[1].

WHO PRODUCES THEM?

In Canada there are five independent organizations that develop voluntary consensus standards within the National Standards System; the Standards Council of Canada (SCC) coordinates their work. Because these organizations meet the criteria established by the Council, they have become "accredited". They are:

Bureau de normalisation du Québec (BNQ)

Canadian Gas Association (CGA)

Canadian General Standards Board (CGSB)

Canadian Standards Association (CSA)

Underwriters' Laboratories of Canada (ULC)

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1. In Canadian standards terminology, **consensus** is defined as substantial agreement reached by concerned interests involved in the preparation of a standard.

Standards published by the five accredited standards-writing organizations are developed by committees whose members represent those segments of society that may be affected by such standards. These standards represent a consensus of a group of experts on the best solution to a problem—taking into account all pertinents factors, at the time the standard is developed. Subject areas are divided among the five organizations to minimize or eliminate duplication of effort.

HOW ARE THEY CLASSIFIED AND IDENTIFIED?

Standards are usually categorized by **subject**. For example, PAINTS AND FINISHES are considered as one subject. The majority of standards-writing organizations use systems that permit the classification and identification of their documents by subject matter.

Although on a world-wide basis standards are published in various sizes and formats, in Canada the differences among documents produced by the accredited standards-writing organizations are minimal. These organizations use two different paper sizes for standards. They are 215 mm X 280 mm (8 ½ x 11 inches), and 150 mm X 225 mm (6 x 9 inches). Nomenclature is essentially the same, consisting of:

- acronym for the standards-writing organization;
- series of numerics or alphanumerics indicating the classification/subject/type of standard;
- additional series of alphanumerics (or numerics only) indicating whether the standard is in metric measure, and its date-of-issue.

The nomenclature on some Canadian standards is preceded with the abbreviation **CAN**. This abbreviation for Canada indicates that the standard has been classified as a **National Standard**, by virtue of its development and publication meeting criteria prescribed by the SCC[2]. These criteria ensure that, among other considerations, such a standard responds to an identified national need.

As an example, CAN/CGSB-2.19-M86 (Figure 1) provides the following information:

- CAN indicates this is a National Standard of Canada;
- CGSB is the Canadian General Standards Board, the producer;
- 2.19 where 2 stands for the subject category of Soaps and Detergents, and 19 is the actual number of the standard for hand dishwashing compound;
- M86 indicates that measurements are in metric; year of issue is 1986.

In the above example CAN/CGSB-2.19-M86, CGSB shows this standard was developed by the Canadian General Standards Board. The use of an

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2. SCC's publication CAN-P-2, entitled *Criteria and Procedures for the Preparation and Approval of National Standards of Canada*, outlines 15 criteria for National Standards. CAN-P-2 is available from SCC.

Figure 1

NATIONAL STANDARD OF CANADA

NORME NATIONALE DU CANADA

CAN/CGSB-2.19-M86

Supersedes/Remplace
2-GP-19M

Hand Dish-washing Compound

Détergent pour lavage de la vaisselle à la main

Canadian General Standards Board CGSB

Office des normes générales du Canada ONGC

acronym (ie. CGSB) to indicate the producer of a standard is a fairly recent change. The previous method employed a code number which indicated the producing standards-writing organization. The codes assigned were as follows:

1. Canadian Gas Association
2. Canadian General Standards Board
3. Canadian Standards Association
4. Underwriters' Laboratories of Canada
5. Bureau de normalisation du Québec

Many standards still use the previous numerical method of identification and will only be changed to the new system as they are reissued.

WHO USES STANDARDS?

Everyone uses or is influenced by standards every day.

Companies use standards to ensure their products meet a particular level of quality, and to reduce production costs.

Purchasers use standards to obtain the level of quality in products their organization requires, and to ensure appropriate value is received for dollars spent.

Businesses use standards to expedite financial and other transactions between institutions.

Governments use standards to ensure the health, welfare and safety of the public in fields such as transportation, construction, environment, food and drugs.

Engineers use standards to design facilities, equipment and systems.

With such diverse interests making use of standards, information resource specialists are called upon to provide documentation on a wide range of subjects from many different sources.

One major benefit of using standards is the ability to **reference** them in other documents. Standards eliminate the necessity of developing and including detailed technical requirements in every shop order, purchase order, regulation, drawing, specification or other documentation. For example, a government regulation (law) will stipulate that seat belts in automobiles must meet a particular standard, to ensure the belts are safe. This makes it unnecessary for legislators to develop their own technical requirements, when drafting regulations[3].

COPYRIGHTS

Copyright protection applies to almost all standards. The reason is that standards-writing organizations derive a great deal of their income from the

3. A government is said to **reference standards in legislation** when it adopts standards as the basis for specifying technical requirements in legislation.

sale of their documents. Under certain written agreements this protection may be waived. However, as with other copyright protection, those who ignore it do so at their own peril. Several lawsuits have been initiated by standards organizations against those who have ignored copyright statements. For standards documents where no copyright statement is made, it is prudent and considerate to request permission if you wish to reproduce them.

INTERNATIONAL STANDARDIZATION

The SCC and the accredited standards-writing organizations take part in international standardization activities through a number of bodies. Much of this activity is through the International Organization for Standardization (ISO), and the International Electrotechnical Commission (IEC).

ISO is a specialized international agency for standardization. Its members are the standards bodies of some 90 countries representing over 95 percent of the world's industrial production. Standards published by ISO encompass a great number of finished products and raw materials. However, their standards do not include the electrical and electronics fields. ISO is a non-governmental agency established for the purpose of developing worldwide standards, to improve international communication and collaboration, and to promote the smooth and equitable growth of international trade.

The IEC has essentially the same structure and goals as ISO but specializes in the electrical and electronic fields.

Several publications which describe these organizations in greater detail are available from SCC. See Chapter VII, Reference 11.

Chapter II
CATALOGUES, DIRECTORIES AND DATABASES

CATALOGUES AND DIRECTORIES

The five Canadian accredited standards-writing organizations mentioned in Chapter I all produce catalogues of their own standards. They also have available a number of other publications intended to keep users and others up-to-date on new developments in standardization and other related activities. Many of these publications are available at no charge.

An annual directory published by SCC, and available at nominal cost, is particularly useful. It is titled *Directory and Index of Standards*. Included are listings of all the standards mentioned in the preceding paragraph, by organization and in numerical sequence. The *Directory* also includes a combined listing of those standards by KWIC (keyword-in-context). See Figure 2. Thus it is not necessary to know which organization produces a standard on a particular subject in order to locate it.

Catalogues also exist for the standards produced by many other non-accredited Canadian organizations. For example, **Supply and Services Canada**, in cooperation with various provincial, territorial and municipal governments, publishes a directory known as the *Index of Standards and Specification used in Procurement*. Standards and specifications referenced by participating jurisdictions in their purchasing activities are included in the *Index*.

Directories of standards published by accredited and non-accredited standards-writing organizations of foreign countries are also available. There are also directories of standards produced by international organizations such as the International Organization for Standardization (ISO), International Electrotechnical Commission (IEC) and the International Maritime Organization (IMO). It is beyond the scope of this guide to reproduce a list of these directories, which refer to upwards of 600 000 documents. Chapter V explains how to obtain this information.

Recent initiatives have seen the development of directories which list **standards referenced in legislation**. These directories are useful because they indicate which standards are called up in government regulations. In 1986 the SCC implemented a database of standards referenced in Canadian federal legislation. The Province of Alberta has also published a directory of standards referenced in its legislation.

DATABASES

The information contained in many directories and catalogues is obtained from computerized databases. Some of these databases may be accessed by microcomputers or terminals, for a fee. Since it is relatively easy to update databases, the information they obtain is usually much more timely than printed media. The search for information and its retrieval is also more effective than manual methods when large volumes are concerned, because

searches can be made as inclusive or exclusive as required, as determined by the database system design.

In Canada, a number of databases are available that are useful when researching standards, or products certified as meeting those standards. The following is a partial list of currently available databases.

- Database name	**STANDARDS AND DIRECTORIES**
- Producer	Canadian Standards Association
- Document collection	Catalogue of CSA standards and certified product directories.
- Host	Canadian Centre for Occupational Health and Safety (CCINFO)
- Further information	Chapter VII, References 03 or 08.
- Database name	**CERTIFIED PRODUCTS DATABASE**
- Producer	Canadian Standards Association
- Document collection	Listing of products that have been certified as meeting CSA standards.
- Host	QL Systems Ltd.
-Further information	Chapter VII, References 08 and 10.
- Database name	**CANADIAN STANDARDS**
- Producer	Standards Council of Canada
- Document collection	Bibliographic data of standards published by accredited Canadian standards-writing organizations.
- Host	CAN/OLE (Canadian Online Enquiry-CISTI National Research Council).
- Further information	Chapter VII, References 07 or 11.
- Database name	**REFERENCED STANDARDS - FEDERAL**
- Producer	Standards Council of Canada
- Document collection	Bibliographic data on standards referenced in Federal technical legislation.
- Host	CAN/OLE (Canadian On Line Enquiry - CISTI/National Research Council)
- Further information	Chapter VII, Reference 11.
- Database name	**INDUSTRY & INTERNATIONAL STANDARDS**
- Producer	Information Handling Services
- Document collection	Bibliographic data of major United States standards-writing organizations. Also includes Canadian (CGSB & CSA), British (BSI), Germany (DIN), Japanese (JIS) standards and military (MLSS) specifications
- Host	BRS - Information Technologies
- Further information	Chapter VII, Reference 09.

Typical database records are shown in Figures 3 and 4.

Figure 2

NATIONAL STANDARDS SYSTEM – DIRECTORY AND INDEX OF STANDARDS
KEYWORD INDEX

TITLE	KEYWORD	SWO	IDENTIFICATION NUMBER
	Petroleum, Liquefied, Gas	BNQ	*2020-200
Installation Code for Natural	Gas Burning Appliances and Equipment	CGA	*CAN/CGA-B149.1-M86
Commercial	Gas Baking and Roasting Ovens	CGA	1.10-1974
	Gas Conversion Burners for Domestic Ranges	CGA	1.5-1974
Lever Operated Pressure Lubricated Plug Type	Gas Shut-Off Valves	CGA	3.11-1972
Lever Operated Nonlubricating	Gas Shut-Off Valves	CGA	3.16-1973
lue Boilers and Hot Water Supply	Industrial and Commercial Gas Designed Atmospherically Fired Vertical F	CGA	3.3-1976
	Industrial and Commercial Gas Fired Conversion Burners	CGA	3.4-1973
	Hose for Portable Gas Appliances	CGA	6.1-1972
lexible Connectors of Other than All Metal Construction for	Gas Appliances F	CGA	6.11-1970
Domestic	Gas Appliance Pressure Regulators	CGA	*CAN1-6.3-M82
Commercial	Gas Clothes Dryers	CGA	7.2-1971
Manually Operated	Gas (Applicance) Shut-Off Valves	CGA	*CAN1-9.1-M81
	Gas Appliance Shut-Off Valves	CGA	9.2-1972
Grenades, Tear	Gas, Pyrotechnic Type, for Open Area Use	CGSB	*136-GP-10MP
Grenades, Tear	Gas, Pyrotechnic Type, for Enclosed Space Use	CGSB	*136-GP-12MP
Cartridges, Tear	Gas, 12 Gauge, for Enclosed Space Use	CGSB	*136-GP-14MP
Identification of Medical	Gas Containers, Pipelines and Valves	CGSB	*CAN/CGSB-24.2-M86
	Gas, Petroleum, Liquefied, Butane	CGSB	*3-GP-13M
Range, Industrial,	Gas, Heavy Duty, with Oven	CGSB	*52-GP-14M
Ovens, Bake,	Gas, 1, 2 and 3 Decks	CGSB	52-GP-18M
Ovens, Roast,	Gas 1, 2 and 3 Decks	CGSB	*52-GP-20M
Range, Industrial,	Gas, Heavy Duty, Without Oven	CGSB	*52-GP-22M
Centrifugally Cast, in Metal Molds or Sand-Lined Molds for	Gas Ductile-Iron Pipe	CSA	B131.14-1977
ion Requirements for Agencies Testing Non-flammable Medical	Gas Piping Systems Qualificat	CSA	*CAN3-Z305.4-M85
ined Code for Marking of Portable Compressed	Gas Containers to Identify the Material Conta	CSA	Z39-1959
Valves for Anhydrous Ammonia and LP	Gas (Other than Safety Relief)	ULC	C125
Safety Relief Valves for Anhydrous Ammonia and LP	Gas	ULC	C132

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Figure 3

INDUSTRY & INTERNATIONAL STANDARDS

(TECH-DATA)

of

Information Handling Services

The following is a typical record of this database which contains bibliographic information on various standards. Commands are provided which allow the user to extract information using various keys.

AN:	CSA A126.10 -M1984	(Accession number)
TI:	Test method for Resilient Flooring	(Title)
SC:	Canadian Standards Association (CSA)	(Society)
DT:	Industry standard (ISTD)	(Document type)
PG:	20 pages	(Page count)
LC:	C-57-11 - Wall/Floor Covering Resilient - floor/tile. C-72- 20 Domestic & Furnishings Floor coverings.	(Locator code)
AA:	No	(ANSI approval)
LG:	EN	(Language)
CF:	Document number A126.10 -M1984 Film location D205-0076	(Location status)
MF:	D391 D-04	(Microfiche location)

Note that all fields are searchable except CF and MF.

Figure 4

REFERENCED STANDARDS - FEDERAL

Standards Council of Canada

The following is a typical record of this database which contains information on standards referenced in Canadian federal legislation. Commands are provided which allow the user to extract information using various keys.

DOSSIER: 2382

ACT: CANADA LABOUR CODE

REGULATION: Oil and Gas Occupational Safety and Health Regulations

DEPARTMENT: Department of Labour

SOURCE: GAZETTE: Canada Gazette Part II SOR/87-612

LOCATION: Sec. 3.14(3)

SWO: Underwriters' Laboratories of Canada

STANDARD REFERENCED: CAN4-S508-M83

TITLE: Rating and Fire Testing of Fire Extinguishers

DATE OF REF: STANDARD: 1983-06-01

DESCRIPTORS: Occupational safety, Natural gas extraction, Petroleum extraction, Crude Oil, Fire extinguishers, Portable

NOTES: As amended to July, 1983

Chapter III
STANDARDS COLLECTIONS

COLLECTION FORMATS

Standards documents exist in essentially four formats: **individual standards** in hard copy, **handbooks of standards** covering specific subject areas, **microform** and **magnetic media**.

The choice of the most suitable media to be used will vary from one collection to another. In extensive collections, more than one type of format will probably be required.

Each format has its own advantages and disadvantages.

Individual standards require the most storage space and maintenance effort. Outdated standards may be easily replaced with new ones; if desirable, the outdated copy can be retained. Archival information may be an important feature in some organizations where a particular issue of a standard is of more concern than the latest issue.

Handbooks of standards, covering specific subject areas, are one of the least expensive formats. Handbooks may have to be supplemented with other individual standards which are referenced but not included. Individual standards within the handbook may be superceded following publication. It is therefore necessary to identify changes as they occur.

Microform is a very convenient method of handling documents. A large collection takes no more space than the average office work station. Both microfiche and microfilm formats are available from suppliers, usually on a subscription basis. With a subscription service, keeping a collection up-to-date probably takes less than six hours a year. Reader/copiers are available which provide hard copies. Although the number of organizations whose standards are available on microform is extensive, in most cases microform collections require supplemental hard-copy documents. The directories provided with microform collections are, in themselves, useful research tools.

One disadvantage of microform formats is that when newly updated microfiche or microfilm is received, old issues must be returned to the supplier. Later on, should a copy of an older edition of a standard be required, it will have to be ordered from the supplier or the standards-writing organization concerned.

The **Visual Search Microfilm File** (VSMF), produced by Information Handling Services and distributed by Canadian Engineering Publications, Toronto, is an example of this format.

Whether an organization can justify the cost of microform collections depends to a great extent on the savings that will accrue from reduced maintenance and search time, as well as space requirements. In any case, these formats deserve more than a cursory consideration.

Magnetic media in one form or another is used by most standards-writing organizations in maintaining their documents on word-processing facilities. Such facilities are capable of handling graphics, which may form a part of the document. At present, there are no Canadian collections which may be acquired in this format.

CLASSIFICATION OF DOCUMENTS

The only occasion when there will be some choice in how to classify a standards collection is when individual standards documents are being maintained. All other formats will be classified automatically.

It is highly recommended that standards be classified in exactly the same sequence as they appear in the directory or catalogue of the producer. Use of a different system may eventually result in maintenance and retrieval problems. In some catalogues an organization may reference standards of another organization. It is best to classify the referenced standards according to the directory of the producer. A typical example is the American National Standards Institute (ANSI). ANSI may adopt the standard of another organization, without change. In such cases the nomenclature of the standard will be ANSI, followed by the number of the producing organization. For example: ANSI/UL 1438-1982. Figure 5 shows several examples from the ANSI catalogue.

OTHER CONSIDERATIONS

Some key points for establishing and maintaining standards collections include:

- In establishing a collection, not only the standards from a particular organization, but also the documents those standards reference within their text will be required. Use of a standard may require copies of the other documents to which it refers. Figure 6 shows how a typical standard makes such references. When providing information or copies of standards, it is important to make the user aware of these other references.
- When answering enquiries regarding standards, it is important to understand exactly what is being requested. Often a particular issue or edition of a standard is needed. Identification is usually by date-of-issue. Be sure to know whether the latest issue, or a particular date-of issue, is required.
- As indicated in Chapter V, the method of advising users of revisions, cancellations, and new editions of documents varies from one standards-writing organization to the next. It is therefore important to know about these methods, and set up the appropriate system for maintaining the collection.

Figure 5

ANSI CATALOGUE EXAMPLES

APPLIANCES, ELECTRIC

Appliance Humidifiers, Method of Measuring Performance of,
ANSI/AHAM HU-1-1980
(where AHAM stands for Association of Home Appliance Manufacturers)

Coffee Makers, Safety Standard for Drip Type
ANSI/UL 1438-1982
(where UL stands for Underwriters' Laboratories)

Figure 6

CAN1-12.4-M84
REFERENCE PUBLICATION

Where reference is made to other publications, such reference shall be considered to refer to the latest edition and revision thereto, unless otherwise specified. This Standard refers to the following such publications and the year dates shown indicate the latest editions available at the time of printing:

CGA Standards (Canadian Gas Association

CAN1-B149.2-M80	Installation Code for Propane Burning Appliances and Equipment
CAN1-8.1-77	Elastomeric Hose and Hose-Couplings for Conducting Propane and Natural Gas

CSA Standards (Canadian Standards Association)

CSA C22.1-1982	Canadian Electrical Code - Part 1
CSA C22.2-No. 22-1963	Electrical Equipment for Flammable Liquid Dispensers

ASTM Standards (American Society for Testing and Materials)

A53-1980	Specification for Pipe, Steel, Black and Hot-Dipped, Zinc-Coated Welded and Seamless
A539-1979	Electric Resistance Welded Coiled Steel Tubing for Gas and Oil Lines

ANSI Standards (American National Standards Institute)

H27.1 (ASTM B43-80)	Seamless Red Brass Pipe
B2.1-1968	Pipe Threads (Except Dryseal)
B16.3-1977	Malleable-Iron Screw Fittings

ULI Standards (Underwriters' Laboratories Inc.)

UL25-1979	Meters for Flammable and Combustible Liquids and LP-Gas
UL51-1980	Pumps for Anhydrous Ammonia and LP-Gas
UL125-1980	Valves for Anhydrous Ammonia and LP-Gas
UL132-1973	Safety-Relief Valves for Anhydrous Ammonia and LP-Gas
UL331-1977	Strainers for Flammable Fluids and Anhydrous Ammonia

Chapter IV
INFORMATION AND SOURCES

THE CANADIAN SCENE

The Canadian scene with respect to public standards information sources consist of: five standards-writing organizations; the Standards Council's **Sales and Information Branch**; and a number of municipal and provincial libraries.

On the one hand, the standards-writing organizations provide information on their own activities which include standards-writing, testing, certification and qualification programs.

The **Sales and Information Branch**, on the other hand, provides information or points-of-contact for national and international organizations. The kind of information available includes, but is not limited to: standards, government regulations, technical trade requirements, certification and qualification programs.

The collections held by municipal and provincial libraries are far less comprehensive than those of the Standards Council. Nevertheless they are key elements in providing standards information.

CANADIAN ACCREDITED STANDARDS-WRITING ORGANIZATIONS

The five organizations referred to in Chapter I each have information centres of their own. These organizations are:

Bureau de normalization du Quebec (BNQ),
Canadian Gas Association (CGA),
Canadian General Standards Board (CGSB),
Canadian Standards Association (CSA),
Underwriters' Laboratories of Canada (ULC).

All five publish directories, booklets and brochures. These publications provide in-depth information on the activities, services and programs of each organization. Many of the publications are available at no charge.

Some of these organizations also make available video tapes, films and other audio/visual material.

Collections of standards and other related reference material are maintained in the libraries of each organization. Public access to these collections is available. Collections are tailored to the requirements of each organization and therefore reflect the type of standards they publish. In the case of CGA and ULC, the collections are generally made up of their own standards and those of other organizations whose standards they reference. The collections of BNQ, CGSB and CSA are much broader in scope, and include the standards of many other organizations.

One of the largest holdings of foreign and international standards collections in the country is open to the public for consultation, at the Rexdale office of the Canadian Standards Association (CSA).

Second largest of its kind in Canada, this collection includes complete sets of International Organization for Standardization (ISO) and International Electrotechnical Commission (IEC) standards, as well as collections of numerous national standards organizations.

To become familiar with the type of standards published by the different standards-writing organizations, obtain copies of their catalogues. The information centres of these organizations will answer enquiries related to their own standards and programs. For enquiries outside their scope of activities, callers will usually be referred to other sources.

As well as providing general standards information, technical enquiries are answered by the appropriate technical personnel within the organization.

These standards-writing organizations are listed in Chapter VII, 02, 04, 05, 08 and 14.

STANDARDS COUNCIL, SALES AND INFORMATION BRANCH[4]

Through its **Standards Sales Division**, the Branch handles sales of foreign national standards for many countries. The Branch will provide information required to obtain standards from countries or organizations it does not service.

The Branch also functions as a Canadian clearing-house for enquiries regarding national standards, international standards and related information, as well as enquiries from foreign countries.

The Branch maintains a collection of over 400 000 standards documents. Copies of the statutes and regulations of the federal and provincial governments of Canada are included in their library. Although not a lending library, it is open to the public for reference purposes.

Staff are proficient in several foreign languages, to assist in researching information from other countries. Except for the purchase of standards, the services of this Branch are free-of-charge.

ISONET

ISONET is the acronym for the **International Organization for Standardization, Information Network**. ISONET is made up of the national standards information centres of sixty countries. These centres exchange information with, and answer enquiries from, other ISONET members. An *ISONET Guide* and *Directory* have been published by ISO. These documents provide ISONET members with procedures and other information pertaining to the network's operation.

The Council's Information and Sales Branch is the Canadian ISONET member. Access to this network permits a rapid exchange of information

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4. The **Information and Sales Branch** comprises the **Standards Sales Division**, and **Standards Information Division.**

when an enquiry is received. Canadians wishing to know about standards or regulations of another country may obtain information through the **Information Division** of the Branch. The service is particularly important to companies wishing to export Canadian goods or services.

Likewise, access to information on Canadian technical requirements is important to Canadian importers.

GENERAL AGREEMENT ON TARIFFS AND TRADE (GATT)

Canada, along with approximately ninety other countries, is signatory to a multilateral agreement intended to improve international trading relationships. A part of this agreement, known as the **Standards Code** and aimed at reducing technical barriers to trade, requires that member countries establish **Enquiry Points**. There are presently 39 signatories to the Code. The role of each Enquiry Point is to exchange information relative to changes in the country's technical regulations, where implementation may affect a trading partner. Under contract from the federal Department of External Affairs, the Council's **Standards Information Division** fulfills that role.

In support of this service, the Division receives from and disseminates to both public and private sectors proposed changes in technical regulations of GATT member countries. Comments or objections from these sectors are referred back to the country proposing the change. Subsequent action may involve the Department of External Affairs.

There are three types of notification services available to Canadians:

(1) Recorded summaries of current proposed changes are available through a telephone service (TELEGATT), in both English and French.

(2) The publication INFORMATECH provides a brief summary of all current proposed changes.

(3) The publication, GATT/TBT Notification, includes a separate sheet for each proposed change, and gives more details than INFORMATECH.

(4) Gatt/TBT notifications are also available through an on-line database. The database provides bilingual information on GATT notifications received by the Canadian Enquiry Point. Users have the option of searching for information by subject, notification number, or by scanning a summary of recent notifications. To obtain additional information, foreign and domestic users should contact SCC. See Chapter VII, 11.

These documents are useful to exporters in the manufacturing and service sectors, as well as government agencies interested in exports.

The Division can obtain from a specific country additional technical information that may be required. If necessary, staff will arrange for the translation of this information into English or French. This service is free-of-charge.

See Chapter VII, Reference 11.

TYPICAL ENQUIRIES

Typical enquiries received by SCC's Information Division are listed below. They provide an indication of the scope of information available.

"What are the chemical compositions and mechanical properties for the following steel types?"
- Germany Designation TSt 37-2;
- Japan Designation SM 41 C.

"Can you identify North American types which have similar compositions and mechanical properties?"

"What are the standards, regulations and certification requirements that must be met in order to sell electrical appliances in the United Kingdom?"

"Are there any Canadian standards for industrial protective headwear? Is there a mandatory or voluntary certification program for this product?"

"What international standards exist for graphic symbols used to identify equipment in motor vehicles?"

HELP FOR EXPORTERS

The Information and Sales Branch is a representative for **Technical Help to Exporters (THE)**, a service of the **British Standards Institution (BSI)**. This service provides exporters with essential information and advice on technical requirements in foreign countries. The four elements of this service are:
- enquiry service for day-to-day problems of exporters
- research and consulting service for problems of greater magnitude
- special updating services provide specific information on changing technical requirements, tailored to the requirements of particular industries
- technical translations of foreign standards, legislation and codes of practice.

A booklet published by **THE** entitled **Technical Barriers to Trade, an Introduction for Exporters** gives additional information on this service. Copies may be requested through the Branch. See Chapter VII, Reference 11.

Le **Bureau de normalisation du Québec** provides further information through a similar arrangement with **NOREX**, a division of **Association française de normalisation (AFNOR)** in France. This service is oriented towards French language clients. See Chapter VII, Reference 02.

REGIONAL STANDARDS COLLECTIONS

Both the Bureau de normalisation du Quebec (BNQ), and the Canadian General Standards Board (CGSB) provide complete collections of their standards to various regional public and educational institute libraries. The locations of these collections are shown in their respective standards directories or catalogues. New and revised editions of standards are provided in order to keep these collections current.

The Government of Alberta has developed a comprehensive directory of standards collections held by various public and private sector libraries throughout the province. This directory permits interlibrary loans or viewing privileges, depending on each library's policy. A major advantage is that users can review the content of many standards almost immediately. Reviewing standards helps eliminate delays when ordering documents from publishers by ensuring the correct document is ordered. Thus the entire standard can be reviewed, instead of simply making reference to a title which may not be comprehensive enough to ensure correct selection.

Other collections of standards exist in both private and public libraries. A number of these libraries are listed on page 37.

Chapter V
OBTAINING DOCUMENTS

There are essentially four sources for obtaining standards and related documents. These sources are classified under the following headings: **CANADIAN STANDARDS** of accredited standards-writing organizations, **FOREIGN NATIONAL STANDARDS, OTHER FOREIGN STANDARDS and OTHER CANADIAN STANDARDS.**

CANADIAN STANDARDS

Documents published by the five Canadian accredited standards-writing organizations should be ordered directly from them. National Standards of Canada that they produce are available in both English and French.

Some organizations include a notification card as part of their standards. This notification card, when completed and returned to the producer, will ensure the user is advised of amendments or other changes to a standard. The organizations that use this system are CGA, CSA, and ULC. Some of the organizations also provide an automatic update service for all of their standards, making it unnecessary to return the notification cards. The procedures for ordering and payment differ from one organization to the next as follows:

Bureau de normalisation du Québec:

While catalogues are available at nominal cost, standards are free of charge. Updating of standards is automatic when requested. Telephone orders are accepted for small quantities. Otherwise orders should be placed by using the form which is included in their catalogue. See Chapter VII, Reference 02.

Canadian Gas Association:

Catalogues are free-of-charge. Orders with a value of $250.00, or less, must be made in writing and accompanied by a remittance. Orders with a value of more than $250.00 will be accepted by telephone, telex or facsimile, if a purchase order number is provided. See Chapter VII, Reference 04.

Canadian General Standards Board:

Catalogues are free-of-charge. Mail orders require that remittance or credit card number be included. Phone orders are accepted using credit cards. Standing orders may be arranged. All documents are available in English or French. A subscription service for updating of documents on an automatic basis is available at nominal cost.

CGSB issues an **Update Bulletin** several times a year. This publication provides comprehensive information on new, revised and cancelled standards, as well as other pertinent information. A subscription to this bulletin is available at nominal cost. See Chapter VII, Reference 05.

Canadian Standards Association:

Catalogues are free-of-charge. Orders may be placed by mail, telephone, telex or facsimile. Standing orders may be arranged. Documents may be ordered from CSA's Rexdale office or from any one of their regional offices, where limited quantities of copies are held. Orders under $175.00 must be prepaid by cheque or credit card. Each location has a sales counter for pickup orders.

CSA publishes **Information Update** with comprehensive information on CSA standards and programs. Subscription is available at a nominal cost. Also available at no charge is the publication **Focus,** which summarizes current CSA activities. See Chapter VII, Reference 08.

Underwriters' Laboratories of Canada:

Catalogues are free-of-charge. Orders must be placed by mail. Orders with a value of $50.00, or less, must be accompanied by a remittance. See Chapter VII, Reference 13.

FOREIGN NATIONAL STANDARDS

Foreign standards of some 90 foreign countries are handled through the **Information and Sales Branch** of the Council. These standards may be purchased from the **Sales Division**. A partial list of countries and organizations dealt with are listed below:

AUSTRIA
(ON-Osterreichisches Normungsinstitut)
BELGIUM
(IBN-Institut belge de normalisation)
DENMARK
(DS-Dansk Standardiseringsraad)
FINLAND
(SFS-Suomen Standardisoimisliitto)
FRANCE
(AFNOR-Association française de normalisation)
GERMANY (Fed. Rep.)
(DIN-Deutches Institut fur Normung)
ITALY
(UNI-Ente Nazionale Italiano di Unificazione)
NETHERLANDS
(NNI-Nederlands Normalisatie-instituut)
NORWAY
(NSF-Norges Standardiseringsforbund)
SWEDEN
(SIS-Standardiseringskommissionen i Sverige)
SWITZERLAND
(SNV-Swiss Association for Standardization)
UNITED KINGDOM
(BSI-British Standards Institution)

UNITED STATES
(ANSI-American National Standards Institute)
(ASTM-American Society for the Testing of Materials)
USSR
(GOST-USSR State Committee for Standards)
INTERNATIONAL ELECTROCTECHNICAL COMMISSION (IEC)
All member countries
INTERNATIONAL ORGANIZATION FOR STANDARDIZATION (ISO)
All member countries
CANADIAN GENERAL STANDARDS BOARD
National Standards of Canada only

Continuous efforts are being made to increase the number of countries and standards organizations represented. See Chapter VII, Reference 11.

OTHER FOREIGN STANDARDS

The purchase of other foreign documents is usually from the producer. Information on the source of these documents may be obtained from the Council's **Information Division**. See Chapter VII, Reference 11.

OTHER CANADIAN STANDARDS

The Standards of non-accredited organizations must be ordered directly from the organization concerned. Included in this category are: governments, industry associations, private companies, and others. The Council's **Information Division** will provide points of contact for enquiries regarding these documents.

Standards published by non-accredited standards-writing organizations are not always available to the public. Details concerning the maintenance or cancellation of such standards may be difficult to determine. But in the absence of other sources, these standards are valuable as reference materials.

Chapter VI
PLANNING FOR THE FUTURE

The Standards Council of Canada has a number of committees established to recommend policies and directions. One of these committees is concerned with information.

ADVISORY COMMITTEE ON STANDARDS INFORMATION SERVICES (ACSIS)

This committee has a mandate to advise and make recommendations to the Council on:

- policy matters related to the role of Council in standards information
- the development and operation of a comprehensive national standards information service
- relationships with other information services, nationally and internationally
- Canadian interests with the information committees of the International Organization for Standardization (ISO/INFCO).

The ACSIS committee consists of members from the resource information and standards communities across Canada. Work is carried out voluntarily, with out-of-pocket expenses for attendance at meetings funded by the Council.

The overall objective of the ACSIS committee is to improve the accessibility of standards and related documents to the Canadian public at large. Council document CAN-P-7, **Standards Information System of Canada,** outlines the terms of reference and procedures for the committee.

Current goals aimed at achieving this objective include:

- establishment of additional centres in Canada where standards will be available for public access
- identification of existing standards collections held by both private and public sector resource information centres
- simplification of the process and reduction of the lead time necessary to acquire standards documents. This may include limited extension of photocopy rights to designated regional centres, additional sales outlets, electronic ordering of documents and, in the long term, the possibility of computerized full on-line text.

NATIONAL STANDARDS INFORMATION SYSTEM OF CANADA (CANSIS)

To carry out the mandate of ACSIS, the Council established the **Standards Information System of Canada**, or **CANSIS**. CANSIS is a network for standards information. The CANSIS network consists of the (five) accredited Canadian standards organizations, a number of other Canadian organizations which have related information services, and the Council. ACSIS gives advisory support to CANSIS. The Council's document CAN-P-7 also states the terms of reference and procedures for CANSIS.

The Council's goal is to establish enough regional CANSIS outlets needed to serve Canadian needs. Resource information centres holding standards collections of any size are encouraged to participate in this network. Presently there are eleven such outlets in Canada.

Information regarding membership in ACSIS or CANSIS may be obtained through the Manager of the Council's **Information Division** 1-800-267-8220. In Ottawa, call 238-3222.

Standards Council of Canada
Information Division
350 Sparks Street, Suite 1200
OTTAWA, Ontario
K1P 6N7

Bureau de normalisation du Québec
50 est, rue St-Joseph
QUEBEC, Québec
G1K 3A5

Canadian Gas Association
55 Scarsdale Road
DON MILLS, Ontario
M3B 2R3

Canadian General Standards Board
OTTAWA, Ontario
K1A 1G6

Canadian Standards Association
178 Rexdake Boulevard
REXDALE, Ontario
M9W 1R3

Underwriters' Laboratories of Canada
7 Course Road
SCARBOROUGH, Ontario
M1R 3A9

Vancouver Public Liabrary
750 Burrard Street
VANCOUVER, British Columbia
V6Z 1X5

Alberta Public Works
Supply and Services
Operational Support Services Branch
3rd Floor
6950 - 113 Street
EDMONTON, Alberta
T6H 5V7

Ministry of Consumer and Commercial Relations
Technical Standards Division
3300 Bloor Street West
Shipp Centre - West Tower4th Floor
TORONTO, Ontario
M8X 2X4

Queen Elizabeth II Library
Memorial University of Newfoundland
ST. JOHN'S, Newfoundland
A1B 3Y1

École Polytechnique
Campus de l'Université de Montréal
Case Postale 6079, Succursale A
MONTRÉAL, Québec
H3B 3A7

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Chapter VII
SOURCES OF ADDITIONAL INFORMATION AND DOCUMENTS

Ref.	Organization
01	**Alberta Public Works, Supply & Services,** Supply Management, Operational Support Services Branch, 3rd Floor, 6950 113th Street, Edmonton, AB T6H 5V7 Telephone: 403-427-8896 Facsimilie: 403-422-1801
02	**Bureau de normalization du Québec,** 50 est, rue St. Joseph, Quebec, QC G1K 3A5 Standards Information, Telephone: 418-643-5114 Certification Information, Telephone: 418-643-5813
03	**Canadian Centre for Occupational Health & Safety,** 250 Main Street E. Hamilton, ON L8N 1H6 Telephone: 416-572-2981
04	**Canadian Gas Association,** 55 Scarsdale Road, Don Mills, ON M3B 2R3 Telex: 06-966824 Facsimile: 416-447-7067 Telephone: 416-447-6465
05	**Canadian General Standards Board,** Ottawa, ON K1A 1G6 Telephone: 819-994-5373 for CGSB standards on microfiche Micromedia Ltd., 165 Hotel de Ville, Hull, QC J8X 3X2 Telephone: 1-800-567-1990 or 819-770-9928
06	**Canadian Government Publishing Centre,** Supply and Services Canada, Ottawa, ON K1A 0S9 Telephone: 819-997-2560 Telex: 053-4296
07	**Canada Institute for Scientific and Technical Information,** c/o National Research Council, Ottawa, ON K1A 0S2 Telephone: 613-993-2013 ENVOY 100: CISTI.REF CAN/OLE: OLE034DE

Ref.	Organization
08	**Canadian Standards Association,** 178 Rexdale Blvd., Rexdale, ON M9W 1R3 Information Centre, Telephone: 416-747-4058 Standards Sales Service, Telephone: 416-747-4044 Telex: 06-989344 Facsimile: 416-747-4149 **Regional offices** **Atlantic region,** 42A Shediac Road Moncton, NB E1A 2R5 Telephone 506-858-9300 Facsimile: 506-858-9302 **Quebec region,** 865 Ellingham Street, Pointe-Claire, (Montreal), QC H9R 5E8 Telephone: 514-694-8110 Telex: 822757 Facsimilie: 514-694-5001 **Prairie region,** 50 Paramount Road, Winnipeg, MN R2X 2W3 Telephone: 204-632-6633 Facsimilie: 204-632-1796 **Western region,** 1707-94 Street, Edmonton, AB T6N 1E6 Telephone: 403-450-2111 Facsimilie: 403-461-5322 **Pacific region,** 5760 Minoru Blvd., Richmond, (Vancouver), BC V6X 2A9 Telephone: 604-273-4581 Telex: 55646 Facsimilie: 604-273-5815
09	**Information Handling Services,** c/o Information Services Division, Canadian Engineering Publications, 111 Peter Street, Suite 411, Toronto, ON M5V 2W2 Telephone: 416-596-1624

Ref.	Organization
10	**QL Systems Ltd.,** 1 Gore Street, Kingston, ON K7L 2L1 Telephone 1-800-267-9470 or 613-549-4611
11	**Standards Council of Canada,** Sales and Information Branch, 350 Sparks St., Suite 1200, Ottawa, ON K1P 6N7 Telephone 1-800-267-8220 (in Ottawa: 238-3222) Telex: 053-4403 Facsimile: 613-995-4564 TELEGATT (English): 613-238-1501 TELEGATT (French): 613-238-1450
12	**Vancouver Public Library,** Science and Technology Division, 750 Burrard St., Vancouver, V6Z 1X5 Telephone: 604-665-3585 Facsimilie: 604-665-2265
13	**Underwriters' Laboratories of Canada,** 7 Crouse Road, Scarborough, ON M1R 3A9 Telephone: 416-757-3611 TELEX 06-963643 Facsimile: 416-757-9540

Chapter VIII
BIBLIOGRAPHY

An asterisk indicates that the publication is available free-of-charge.

ISO/IEC Guide 2/86 (fifth edition)
International Organization for Standardization
See chapter VII, Reference 11

Standards and Standardization
Marcel Dekker Inc., New York
Author; Charles D. Sullivan
ISBN 0-8247-1919-0
See chapter VII, Reference 11

Standardization and Documentation
International Organization for Standardization
ISBN 92-67-10071-8
See chapter VII, Reference 11

Access to Standards Information. 1986
International Organization for Standardization
ISBN 92-67-10118-8
See chapter VII, Reference 11

Standardization is Good Business
Standards Council of Canada
Author; R.P. Preston
ISBN 0-920360-08-4
See chapter VII, Reference 11

SYMPOSIUM-Implementing a Standard Program for Procurement
Standards Council of Canada
Author: Norm Hagan
ISBN 0-920360-28-9
See chapter VII, Reference 11*

Publications of the Standards Council of Canada
Standards Council of Canada
See chapter VII, Reference 11*

Directory of Standards Referenced in Legislation
Alberta Public Works, Supply and Services
See chapter VII, Reference 01*

Directory of Standards Collection in Alberta
Alberta Public Works, Supply and Services
See chapter VII, Reference 01*

Agreement on Technical Barriers to Trade
General Agreement on Tariffs and Trade
See chapter VII, Reference 11*

Directory and Index of Standards
Standards Council of Canada
See chapter VII, Reference 11

Catalogue - National Standards
Standards Council of Canada
See chapter VII, Reference 11

Technical Barriers to Trade-an introduction for exporters
British Standards Institution
See chapter VII, Reference 11

APPENDIX

Acronyms used in this guide

AHAM	Association of Home Appliance Manufacturers
ANSI	American National Standards Institute
ACSIS	Advisory Committee on Standards Information Services
BNQ	Bureau de normalisation du Québec
BSI	British Standards Institution
CANSIS	National Standards Information System of Canada
CCINFO	Canadian Centre for Occupational Health and Safety, Information
CGA	Canadian Gas Association
CGSB	Canadian General Standards Board
CISTI	Canada Institute for Scientific and Technical Information
CSA	Canadian Standards Association
GATT	General Agreement on Tariffs and Trade
IMO	International Maritime Organization
ISO	International Organization for Standardization
ISO/INFCO	International Organization for Standardization, Information Committee
IEC	International Electrotechnical Commission
SCC	Standards Council of Canada
UL	Underwriters Laboratories (USA)
ULC	Underwriters' Laboratories of Canada

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University Research Contribution

The Standards Council's University Research Contribution awards funds to university faculty and students for research projects. The purpose of this funding is to advance knowledge, understanding and appreciation of the role and impact of standards. The topic of the research is open but should concern technical, economic or social issues related to standardization.

Student proposals must be submitted under the direct supervision of a qualified faculty member.

Research proposals are assessed by the Council's Research Contribution Advisory Committee, which selects successful applicants on the basis of merit.

In the 1987-88 academic year the Council's financial commitment to this program amounted to $30,000.

To receive further information, write to the Education Division of the Council. See Chapter 7, Reference 11.

Norm Hagan

Mr. Hagan is president of Norm Hagan & Associates Inc., Standards Consultants. Until November 1986, he was Director of Operational Support Services for Alberta Public Works Supply and Services. As such, he was responsible for promoting the use of standards in the procurement of goods and services. Mr. Hagan also initiated the Canadian Committee for Procurement Standards (a joint federal, provincial and municipal organization) dedicated to sharing information among jurisdictions.

Previously Mr. Hagan worked 28 years for the Iron Ore Company of Canada, where his background included numerous fields such as communications, electronics, mineral processing, industrial engineering and standardization. He is currently a member of the Institute of Electrical and Electronics Engineers (IEEE) and the Standards Engineering Society (SES).